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Training Manual
(TRAMAN)

Damage Controlman 3 & 2

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Reviewed and approved for continued use on 11 May 1992.

Although the words “he,” “him,” and “his” are used sparingly in this manual to enhance communication, they are not intended to be gender driven nor to affront or discriminate against anyone reading this text.

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Specific Instructions and Errata for
Training Manual

DAMAGE CONTROLMAN 3 & 2
NAVEDTRA 10572

1. No attempt has been made to issue corrections for errors in typing, punctuation, and so on, which will not affect your ability to answer the question.

2. Textbook, NAVEDTRA 10572

Make the following changes:

PAGE COLUMN	CHANGE
1-10 Left	Add the following paragraph before the summary:

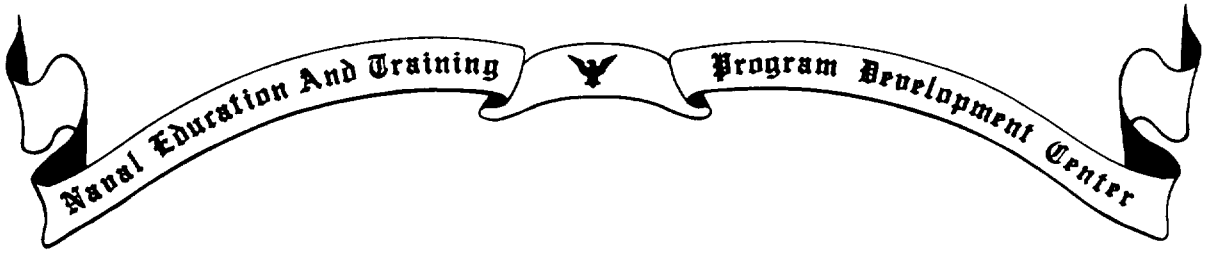
SAFETY INFORMATION

All hands are responsible for their own safety and the safety of their shipmates. Damage control functions and drills are hazardous evolutions and can lead to personnel injuries. Safety precautions are mandatory when working around electrical equipment, handling chemicals, and dealing with potential heat stress. The Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat. OPNAVINST 5100.19B, provides safety precautions and general safety standards, As a Damage controlman, you need to be familiar with these safety precautions and give this information to repair party personnel. ”

5-59 Left	Change the last paragraph in sub-paragraph f under “Ready-Service Storage Rules” to read:

“See Naval Ships’ Technical Manual, chapters 550 and 074, volume 3, and the NAVOSH Program Manual for Forces Afloat, OPNAVINST 5100.19B, chapter C23, for detailed precautions.”

PAGE	COLUMN	CHANGE
7-20	Right	Add the following WARNING before the CAUTION paragraph under "Resins and Hardeners": "WARNING Resins and hardeners are hazardous materials and can be hazardous to your health if not handled properly. Avoid prolonged skin contact with the components and the mixture. During the reaction phase, the mixture can cause thermal and chemical burns. Avoid breathing the vapors from the components and the mixture. Properly dispose of all waste material as directed by your supervisor."
Entire Text		Change "NSTM, chapter 9930" to read "NSTM, chapter 555" throughout the text,



DAMAGE CONTROLMAN 3 & 2

NAVEDTRA 10572

1986 *Edition Prepared by*
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PREFACE

Damage Controlman 3 & 2, NAVEDTRA 10572, is a rate training manual (RTM) which, when combined with its nonresident career course (NRCC), NAVEDTRA 80572, form a self-study package that provides training to all personnel preparing for advancement to DC3 and DC2.

The primary purpose of training is to produce a combat-ready Navy that can guarantee victory at sea. That victory depends upon the readiness of the personnel.

Each individual is assigned tasks depending upon the needs of the ship. The information in this manual relates to the damage control tasks that are assigned to personnel serving aboard ships as a DC3 or DC2. These tasks are required to maintain and protect the ship and its systems. When we have personnel aboard who can and do perform these tasks efficiently, we will have each ship operating at the high state of readiness that is essential to victory at sea.

When you are assigned duties aboard ship as a DC3 or DC2, you will be expected to know and understand the information in this manual. The success of the Navy depends in part on your ability and the manner in which you perform your assigned duties.

Damage Controlman 3 & 2, NAVEDTRA 10572, was prepared by the Naval Education and Training Program Development Center, Pensacola, Florida, for the Chief of Naval Education and Training. Technical assistance was provided by the Naval Sea Systems Command; the Naval Damage Control Training Center, Philadelphia; Naval Schools Command, Treasure Island, San Francisco, California; the Service School Command, San Diego, California; and the Naval Technical Training Center, Millington, Tennessee.

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THE UNITED STATES NAVY

GUARDIAN OF OUR COUNTRY

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends; the United States Navy exists to make it so.

WE SERVE WITH HONOR

Tradition, valor, and victory are the Navy's heritage from the past. To these may be added dedication, discipline, and vigilance as the watchwords of the present and the future.

At home or on distant stations we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us: our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

THE FUTURE OF THE NAVY

The Navy will always employ new weapons, new techniques, and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war.

Mobility, surprise, dispersal, and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past.

Never have our opportunities and our responsibilities been greater.

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DAMAGE CONTROLMAN 3 & 2 OCCUPATIONAL STANDARDS

CHAPTER 1

THE DAMAGE CONTROLMAN RATING

The Damage Controlman rating is a general rating. There are no service ratings.

As you study the requirements for advancement to DC3 and DC2, you will notice that the rating covers a wide variety of subject matter. As a Damage Controlman you will perform organizational and intermediate level maintenance and repair of damage control equipment and systems; plan, supervise and perform tasks necessary for damage control, ship stability, preservation of watertight integrity, firefighting, and chemical biological and radiological (CBR) warfare defense; instruct and coordinate damage control parties; instruct personnel in the techniques of damage control and CBR defense; supervise and perform tasks in procurement and issuance of supplies and repair parts; and prepare records and reports.

As you advance to DC3 and then to DC2, you will find that you have increasing responsibilities for military and technical leadership. Your responsibilities for military leadership are about the same as those of petty officers at the same level in other ratings; every petty officer must be a military leader as well as a technical specialist. Your responsibilities for technical leadership are special to your own rating and are directly related to the nature of your work.

Your ability to lead other men is particularly important, In casualty situations, damage control can become an all hands evolution, with damage controlmen holding key positions in the damage control organization. In order to coordinate the efforts of many men for the successful control of damage, you must possess qualities of leadership as well as skills and knowledge in the field of damage control. Organization and teamwork are the keys to successful damage control. Strong leadership is required to keep the organization functioning and to ensure effective teamwork needed to meet the following goals:

1. Preserve or reestablish watertight integrity, stability, maneuverability, and offensive power
2. Control list and trim
3. Repair material and equipment
4. Limit the spread of, and provide protection from, fire
5. Limit the spread of, remove the contamination by, and provide adequate protection against, chemical and biological agents or noxious gases and nuclear radiation
6. Care for wounded personnel

Shipboard damage control will work toward these three basic objectives:

1. Take all practicable preliminary measures to prevent damage
2. Minimize and localize damage as it occurs
3. Accomplish emergency repairs as quickly as possible, restore equipment to operation, and care for injured personnel

The damage control organization has the same objectives whether the country is at peace or at war. The ship's ability to perform its mission will depend upon the effectiveness of its damage control organization.

To attain these objectives, we need to accomplish the following actions:

1. Preserve stability and fume-tight and watertight integrity (buoyancy).
2. Maintain the operational capabilities of vital systems.
3. Prevent, isolate, combat, extinguish, and remove the effects of fire and explosion.
4. Detect, confine, and remove the effects of chemical, biological, or radiological contamination.

5. Prevent personnel casualties and administer first aid to the injured.

6. Make rapid repairs to correct structural and equipment damage.

Damage control includes the following areas of responsibility:

1. The functional combination of all equipment, material, devices, and techniques that prevent and minimize damage and restore damaged equipment and structures. This damage can occur in wartime or peacetime.

2. The passive defense against conventional, nuclear, biological, and chemical warfare.

3. All active defense measures short of those designed to prevent successful delivery of an enemy attack by military means or sabotage.

In the rest of this chapter, we will discuss the damage control responsibilities of various individuals, DC training, DC personnel qualification standards, and sources of information.

DAMAGE CONTROL RESPONSIBILITIES

Damage control is the responsibility of all hands. All personnel must know their assignments within the damage control organization and understand the importance oft hose assignments. Damage control cannot be overemphasized. The necessary state of readiness can only be achieved through a reliable program. The program must be supervised by an influential and energetic individual who is enthusiastic, well-trained, and determined. While we might not cover all areas completely, we will cover the basic responsibilities of key individuals.

The *Surface Ship Damage Control* manual, NWP 62-1, describes the duties and functions of various ship's personnel. The following responsibilities are taken from *U.S. Navy Regulations, 1973;* NWP 62-1; and OPNAVINST 3120.32A. They apply only to damage control. These responsibilities do not supersede or cancel those covered in *U.S. Navy Regulations, [973;* NWP 62-1; or OPNAVINST 3120.32A. Damage control is the responsibility of all hands. That includes everyone in each department aboard ship from the newest recruit to the commanding officer.

COMMANDING OFFICER

Chapter 7 of *U.S. Navy Regulations, 1973* describes the various broad responsibilities of the commanding officer (CO). One of the requirements is that the CO " . . . maintain his command in a state of maximum effectiveness for war or other service . . . ." The CO should "Immediately after a battle or action, repair damage so far as possible, (and) exert every effort to prepare his command for further service . . . ."

To carry out this charge, the commanding officer must ensure that the command is adequately trained. This training is done through lectures, schools, and continual exercises in all aspects of damage control. The commanding officer should be fully aware of all of the ship's weaknesses. These include the inadequacy and inoperability of all damage control equipment. Shortages and defects should be corrected immediately.

EXECUTIVE OFFICER

The executive officer (XO) advises the commanding officer on the status of the ship's damage control readiness. The XO ensures that responsible personnel carry out the following requirements.

1. Conduct damage control training for the ship's company.
2. Maintain ship's readiness to combat all casualties and damage that threaten the ship.

The XO must be intimately familiar with all damage control evolutions. This includes supervision of all actions related to damage control.

OFFICER OF THE DECK

The officer of the deck (OOD) is the senior member of the underway watch team. As the primary assistant to the commanding officer on the bridge, the OOD will carry out the following duties and responsibilities:

1. Be intimately familiar with the ship. This includes its material condition and the established procedures for emergencies.
2. Know the correct course of action or options for various damage control situations.
3. Promptly analyze a situation and take prompt, positive, and correct counteraction.
4. In the absence of the commanding officer, maneuver the ship.

The OOD's ability to act properly and promptly will be in direct proportion to that officer's training, knowledge of the ship, damage control procedures, and equipment available.

COMMAND DUTY OFFICER IN PORT

The command duty officer (CDO) in port is designated by the commanding officer. This officer is eligible for command at sea and is the deputy to the executive officer for a prescribed period of time. The CDO will carry out the following duties and responsibilities.

1. Carry out the ship's daily routine in port.
2. Carry out the duties of the XO during the temporary absence of that officer.
3. Advise and, if necessary, direct the OOD in matters concerning the general duties and safety of the ship.
4. Keep informed of the ship's position, mooring lines, or ground tackle in use.
5. Know the status of the engineering plant, and all other matters that affect the safety and security of the ship.
6. In times of danger or emergency, take any action necessary until relieved by a senior officer in the succession of command.
7. Relieve the OOD when necessary for the safety of the ship, and inform the commanding officer when such action is taken.

DEPARTMENT HEADS

We can achieve adequate damage control readiness only by the participation of all departments aboard ship. For this reason, each department head will carry out the following duties and responsibilities.

1. Ensure that the material conditions of readiness within the department are at their best. These conditions are prescribed by compartment checkoff lists provided by the damage control assistant (DCA). The DCA is discussed later in this chapter.
2. Provide for continual and periodic inspections of department spaces in accordance with current planned maintenance system (PMS) procedures.
3. Require that damage control equipment and fittings be maintained in their proper locations and in operating order.
4. Assign specific damage control duties to individuals within the department. included will be the designation of a departmental damage control chief petty officer (DDCPO) for the department and a division damage control petty officer (DCPO) for each division within the department.
5. Provide personnel for damage control, repair, fire, salvage, and rescue parties, and for other assignments as required by the ship's organization bills.
6. Require that departmental material and equipment are secured to protect them from damage by heavy seas.
7. Require an immediate report to the DCA of any deficiency in damage control markings, devices, fittings, equipment, or material, and initiate corrective action.
8. Train personnel in damage control matters, in coordination with the DCA.
9. Be prepared to strip ship, or clear for action, in accordance with the ship's instructions.

ENGINEER OFFICER

The engineer officer is also known as the damage control officer. This officer is responsible to the commanding officer for the following duties and responsibilities:

1. The operation, care, and maintenance of the main propulsion plant, auxiliary machinery, and piping systems
2. The control of damage
3. The operation and maintenance of electric power generators and distribution systems
4. The repairs to the hull
5. The repairs to material and equipment of other departments that are beyond the capacity of those departments but within the capacity of the engineering department

In amplification of duties in *U.S. Navy Regulations, 1973* the engineer officer is required to carry out the following duties and responsibilities.

1. Maintain the hull, machinery, and electrical system in battle readiness.
2. Supervise fire fighting. Ensure that the ship's fire bill is adequate. Assign and instruct personnel in accordance with the provisions of the bill.
3. Maintain interior communication equipment.

4. Control and restore engineering and ship control casualties.

5. Coordinate all naval shipyard work. This includes all correspondence or communications on alterations or repairs to the hull and installed equipment.

6. Maintain the PMS and other operating and maintenance records.

7. Act as technical assistant to the executive officer to carry out chemical, biological, and radiological (CBR) defense procedures,

8. Provide ship facilities, equipment, and key personnel to repair the hull and machinery. Ensure repairs to material and equipment of other departments that are within the capacity of the engineering department.

9. Organize Repair 5 (Propulsion) in accordance with the ship's battle bill.

10. Supervise the training of Repair 5.

11. Assign appropriate engineering ratings to other repair parties in accordance with the ship's battle bill.

DAMAGE CONTROL ASSISTANT

The damage control assistant (DCA) is responsible, under the engineer officer, for the control of damage. This includes the control of stability, list, and trim. It also includes fighting fires, repairing damage, and maintaining CBR defense.

The DCA is the overall coordinator of damage control matters within the command organization. This responsibility includes the ship's damage control training program. During emergency situations, the DCA controls the damage control problem with the technical advice and assistance of all departments. Fires and other damage that occur while the ship is at general quarters will be handled as a battle casualty. Corrective action under the direction of the DCA will be taken by the repair parties in the vicinity. On aircraft carriers, the ship's air officer will direct repair parties for fires in aircraft or associated equipment on the flight deck or in the hangar bays.

The DCA will carry out the following damage control duties and responsibilities:

1. Prepare directives for the signature of the commanding officer in connection with all damage control functions requiring coordination of departments.

2. Submit to the planning board for training, a schedule of all-hands damage control training requirements, including battle problem requirements.

3. Prepare a damage control training syllabus and provide damage control instructors for all-hands training.

4. Furnish standard damage control equipment (tools, portable lights, and portable pumps) to repair party lockers and to other prescribed locations throughout the ship. Conduct periodic inspections of such equipment.

5. Assign Damage Controlmen and Hull Maintenance Technicians to various repair parties in accordance with the ship's battle bill and manning document.

6. Conduct inspections throughout the ship, accompanied by the cognizant department head, to ensure that the ship's watertight integrity is maintained. Ensure that all departments are maintaining a high degree of damage control readiness.

7. Ensure that the master damage control book is updated whenever alterations are made to the ship.

8. Ensure that damage control compartment checkoff lists are posted.

9. Ensure that damage control markings, routes, stations, and labels are posted throughout the ship.

10. Ensure that emergency escape routes to weather decks are clearly labeled.

11. Maintain a damage control central (DCC) with facilities to evaluate damage to the ship's hull and equipment and to make decisions to counteract the effects of such damages. Coordinate repair parties and keep the commanding officer informed of major developments.

12. Prescribe routes for transporting injured personnel to battle dressing stations.

13. Ensure that an effective organization is always present for execution of each of the emergency bills.

14. Inform the engineer officer of any condition or practice that lowers the damage control readiness of the ship.

15. Organize Repairs 1, 2, 3, 4, and 7 in accordance with the ship's battle bill.

16. Personally direct the training of Repairs 1, 2, 3, 4, and 7, and DCC personnel.

17. Ensure, in coordination with department heads, that DDCPOs and DCPOs are trained to accomplish their assigned duties.

18. Act as, or supervise the duties of, the gas free engineer.

19. Ensure that a liquid load status is provided daily to damage control central and all repair lockers (list status in feet and inches).

DAMAGE CONTROL WATCH OFFICER

The damage control watch officer (DCWO), when assigned, will carry out the following duties and responsibilities:

1. Supervise the maintenance of any material condition of readiness in effect on the ship. This includes the responsibility to check, repair, and keep the various hull systems in full operating condition.

2. Report directly to the OOD on all matters affecting the watertight integrity, stability, or other conditions that affect the safety of the ship.

3. Report to the DCA for technical control and matters affecting the administration of the watch. The damage control patrols and the petty officers in charge of repair parties report to the DCWO.

4. Maintain a written damage control log. The log entries will show the hourly readings of the firemain pressure and the number of fire pumps in operation. Make entries such as the ship's getting underway, anchoring, and mooring. Include special evolutions such as general quarters, emergency drills, and the setting of material conditions, the discrepancies reported, and the corrective action taken.

5. Supervise the maintenance of the ship's damage control closure log. List all fittings that are in violation of the prescribed material condition of readiness. Entries will show the following information:

a. Name of the person requesting permission
b. Rate of the person requesting permission
c. Type of fitting opened
d. Identification of the fitting
e. Classification of the fitting
f. Time the fitting was opened
g. Estimated time the fitting is to remain open
h. Time the fitting was closed
i. Name of the person granting permission
j. Rate of the person granting permission

Make all entries in ink; no erasures are to be made. Correct all errors by drawing a line through the error and initialing it. Make the correct entry on the following line. The dates for opening the fitting include the day, month, and year, Keep the closure log sheets on file for a period of 6 months.

The estimated time open will not be more than 24 hours. At the end of the 24 hours, the fitting will either be relogged open or Iogged closed. Anyone who violates the material condition of readiness in effect without permission to do so will be subject to disciplinary action.

6. At the end of each watch, obtain from the ship's oil king a report on which fuel tanks were emptied during the watch. List in the damage control log the compartment numbers of the tanks and whether or not they have been ballasted.

7. Report hourly to the OOD on the status of the ship's watertight integrity.

8. When the ship is under way, have the sounding and security watch take and report soundings of all voids and cofferdams at least once during each 4-hour watch. While in port, take soundings at least once each day. In addition, have the watch check the material condition of readiness in their respective areas. Report any corrective action taken in this respect.

9. Ensure that the draft is taken, or computed if at sea, and logged daily on the 0400 to 0800 watch. The draft should be taken daily, before entering or leaving port, before and after fueling, when taking on supplies, or when rearming.

10. Notify the OOD, DCA, and weapons department duty officer when the fire alarm board indicates that the temperature of any magazine is above 105 'F.

11. Ensure that the master key to the repair lockers is issued only to authorized personnel.

12. Daily at 1700, request the OOD to have the word passed, "All divisions check the setting of material condition YOKE. Make reports to damage control central. " After a half hour, ensure that any division that has not reported does so.

FIRE MARSHAL

Large ships, such as aircraft carriers, may have a fire marshal assigned. The fire marshal is an assistant to the engineer officer. The duty of the fire marshal is to help the DCA prevent and fight fires. The fire marshal must be thoroughly familiar with the following documents:

1. *Gas Free Engineering, Naval Ships' Technical Manual,* chapter 074, volume 3
2. *Practical Damage Control, Naval Ships' Technical Manual,* chapter 079, volume 2
3. *Fire-fighting Ship, Naval Ships' Technical Manual,* chapter 9930
4. Ship's instructions

5. Ship's plans
6. Ship's compartmentation

The fire marshall should conduct daily inspections throughout the ship, paying particular attention to good housekeeping, fire equipment, and fire and safety hazards.

The fire marshal reports fire hazards and recommends corrective action. These reports are submitted to the DCA with copies to the XO and appropriate department heads. A follow-up inspection should be made to ensure that corrective action has been taken.

The fire marshall should also carry out the following duties and responsibilities:

1. Train the ship's fire teams, rescue and assistance teams, and DDCPOs.
2. Prior to overhauls or major repair availabilities, set up and train a ship's fire-watch team and make their assignments.
3. Take charge at the scene until relieved at general quarters. Keep DCC or the OOD informed of the exact status of the situation.

DIVISION OFFICER

The division officer takes all practicable preventive measures before damage occurs. This includes maintenance of the ship's watertight and airtight integrity, removal of fire hazards, and maintenance of emergency equipment. This is done by making daily inspections of divisional spaces and equipment to verify that they are maintained in the best possible condition. The following publications are helpful to the officer conducting these checks.

1. *Practical Damage Control, Naval Ships' Technical Manual,* chapter 079, volume 2
2. *Inspections, Tests, Records, and Reports, Naval Ships' Technical Manual,* chapter 090
3. *Lighting, Naval Ships' Technical Manual,* chapter 330
4. *Fire-fighting Ship, Naval Ships' Technical Manual,* chapter 9930
5. *General Specifications for Ships of the U.S. Navy,* chapter 602

Most of these checks and inspections are done by the DDCPO, who is discussed next. Any discrepancies that the DDCPOs cannot correct should be reported to the division officer. Any discrepancies the division officer cannot correct should be referred to the DCA. The DDCPO conducts most of the checks, but the division officers are still responsible for visual inspections of their spaces.

DEPARTMENTAL DAMAGE CONTROL CHIEF PETTY OFFICER

On large ships, a departmental damage control chief petty officer (DDCPO) will be assigned. The DDCPO assists the DCA by carrying out the following duties and responsibilities:

1. Coordinate the relieving, qualifying, and training of the divisional damage control petty officers (DCPOs) within the department.
2. Inform the DCA and fire marshal of any changes of personnel assigned as DCPO.
3. Ensure that the DCPOs are performing their duties.
4, Perform other duties as directed by the DCA, the fire marshal, and the type commander.

DIVISION DAMAGE CONTROL PETTY OFFICER

A senior petty officer within each division is assigned as the division damage control petty officer (DCPO) for that division. The DCPO is responsible, under the division leading petty officer (LPO), for damage control functions of the division and related matters. Outside normal working hours, duty division section leaders will perform DCPO duties on their duty days.

Each DCPO should carry out the following duties and responsibilities:

1. Understand all phases of the ship's damage control, fire fighting, and CBR defense procedures.
2. Assist in the instruction of division personnel in damage control, fire fighting, and CBR defense procedures.
3. Ensure the preparation and maintenance of damage control compartment checkoff lists for all divisional spaces.
4. Supervise the setting of specified damage control material conditions within divisional spaces and make required reports.
5. Weigh portable CO_2 bottles, inspect and test damage control and fire fighting equipment, and prepare required reports for approval by the division officer in accordance with current ship's instruction.

6. Ensure that the required battle lanterns, dogging wrenches, spanner wrenches, and other damage control equipment are in place and in a usable condition in all divisional spaces.

7. Ensure that all compartments, piping, cables, and damage control and fire fighting equipment are properly stenciled or identified by color codes.

8. Ensure the posting of safety precautions and operating instructions in required divisional spaces.

9. Assist the division officer in the inspection of divisional spaces for cleanliness and preservation, and assist in the preparation of required reports.

10. Conduct daily inspections of divisional spaces for the elimination of fire hazards.

11. Perform such other duties with reference to damage control and maintenance of divisional spaces as may be directed by the division leading petty officer, the division officer, the fire marshal, and the DCA.

DAMAGE CONTROLMAN

As a Damage Controlman (DC) you will work with damage control daily. During your daily routine, you will work to prevent fires and flooding while accomplishing your regular job. You will inspect and maintain damage control equipment and systems. When you first start out, you will be assigned to the emergency damage control teams. You will be required to familiarize yourself with your ship's systems and all aspects of damage control. Eventually, you will qualify as scene leader for the emergency damage control teams. You will also be expected to help train other personnel in damage control. Although damage control is an ALL-HANDS responsibility, the DC community ensures that damage control readiness is kept at the highest possible level

PROFESSIONAL DEVELOPMENT

We said earlier that damage control covers a wide variety of areas. Training is essential for an effective emergency party, This training is accomplished in several ways. You may learn through schools, correspondence courses, on-the-job training, shipboard training lectures and films. Whichever method is used, training will help you become an asset in the damage control field. These methods of training are explained below.

NAVY SCHOOLS

There are a number of Navy schools to train personnel in damage control. Your DCA normally requests quotas to send a complete repair party to a school as a unit. Members of the repair parties train together and learn to work as a unit. These schools include shipboard damage control, shipboard fire fighting, and aviation fire fighting. Refer to the *Catalog of Navy Training Courses (CANTRAC),* NAVEDTRA 10500, for the latest listing of courses available.

CORRESPONDENCE COURSES

There are a number of correspondence courses available to help you learn damage control. The correspondence course that goes with this manual is mandatory for all DCs. There are two other recommended courses that are not mandatory, but are a good source of training; *Practical Damage Control,* NAVEDTRA 10936, is an officer-enlisted course. It covers damage control equipment, systems, and procedures. *Theoretical Damage Control,* NAVEDTRA 10937, is an officer course that deals with ship's stability, This course is recommended for those assigned as locker leader for a repair party.

ON-THE-JOB TRAINING

Another method of training is on-the-job training. This method allows you to learn while performing your daily tasks. Your fellow workers may teach you by sharing with you their knowledge. Otherwise, you may learn on your own through your experiences and by studying various publications.

You should have access to the manufacturers' technical manuals for your equipment. These manuals will give you information on the operation, maintenance, and repair of the equipment. Use them whenever you work on a piece of equipment that is new to you.

In addition, there are 16 single-subject training manuals available. These booklets contain basic information on the operation of equipment and systems. You may find a listing of these manuals in the *List of Training Manuals and Correspondence Courses,* NAVEDTRA 10061.

On-the-job training is also carried out through emergency drills. These drills help train emergency party personnel to perform their assignments in a professional manner. The drills also train individuals to work together as an effective unit.

You will also have training lectures and films on damage control. These films are listed in the *Department of the Navy Catalog of Audiovisual Production Products,* OPNAVINST 3157.1. The training films are good training tools, especially for views of realistic situations. One film shows an actual fire being fought on an aircraft carrier. The people in the films are not actors; they are sailors combating a casualty. The personnel casualties are real. These films will show that damage control is serious business and an all-hands responsibility.

SOURCES OF INFORMATION

There are several sources of information that you will find valuable when working with damage control. These sources of information include the *Naval Ships' Technical Manuals,* your ship's Damage Control Book, Repair Party Manual, and the Ship's Information Book. You should become familiar with each of these publications.

Naval Ships' Technical Manual (NSTM)

A complete set of *Naval Ships' Technical Manuals* should be available in the engineering log room. Several volumes of these manuals cover different aspects of damage control. These include fire fighting, flooding, ship's stability, and CBR countermeasures. These manuals will help you complete your damage control personnel qualification standards.

Damage Control Book

Damage control books are furnished to all naval ships over 220 feet long and to some select smaller ships. Ships under 220 feet long that are not issued a damage control book may develop their own. These books contain descriptive information, tables, and diagrams. Each book is pertinent to an individual ship. The information given covers the following areas and systems:

1. Damage control systems
2. Ship's compartmentation
3. Ship's piping systems
4. Ship's electrical systems
5. Ship's ventilation systems
6. General information

Naval Sea Systems Command (NAVSEA) maintains a record of all Damage Control Books distributed. The books may not be transferred without NAVSEA authorization. The engineer officer is normally the custodian of the Damage Control Books. Upon transfer, this officer must account for all copies before passing custody to the relieving officer.

You may requisition additional books with diagrams lithographed in color from the Naval Supply Depot, Philadelphia. Books with black-and-white diagrams should be requested from the planning yard of the ship. Copies of the Damage Control Book should be available in DC central, main engine control, and each repair party locker.

It is important to keep all copies of the ship's Damage Control Book up to date. One copy should be considered the "master copy" and be kept current at all times by the DCA. The master copy is then used to update the other copies. The NSTM chapter 079, volume 2 contains the guidelines for updating a Damage Control Book, These changes include alterations completed by the ship's force and those completed by other activities. When the ship is decommissioned and scheduled for disposal or scrapping, the Damage Control Books should be burned and their disposition reported to NAVSEA.

Repair Party Manual

The type commander is responsible for the preparation of a standard repair party manual for ships under his authority. The repair party manual provides detailed information on the standard methods and techniques used in damage control as outlined in the NWP 62-1. A standard repair party manual may include the following information:

1, A listing of the important features of each repair party area, including machinery, storage spaces, location of repair lockers, and magazines

2. Protective measures involving material and personnel with respect to imminent air attack, surface attack, underwater attack, fire, collision, and CBR attack

3. Methods of investigating damage; necessary precautions and means of reporting damage

4. Use of equipment for the following purposes:

a. Fire fighting

b. Flooding control

c. Repairing damage in action (shoring, pipe patching and so forth)

d. Controlling of CBR contamination (monitoring, reporting, and decontamination of material)

e. Personnel casualty control (first aid and decontamination)

f. Primary and alternate methods of providing emergency service to vital systems by means of casualty power, emergency communications, and jumpers to restore firemain or magazine sprinkling service

5. Damage control central (DCC) location, equipment installed, communications, and personnel

6. Chain of command diagram

7. Secondary DCC description

8. Repair parties-personnel billets, including duties, functions, and responsibilities; subunits (where applicable); and required publications, plates, plans, and diagrams

The repair party manual should include damage control procedures covering emergency damage control communications, casualty power, and counterflooding (where applicable). Door and hatch locations, air-conditioning and ventilation systems, and compressed air systems are also included.

Charts, diagrams, or detailed listings of fittings are not required in the type repair party manual. Such information is available in other publications. One of these is the NAVSEA Damage Control Book, which should be available at every repair party locker.

Commanding officers, with the assistance of their engineer officers and DCAs, are responsible for ensuring that the standard repair party manual for their ship has only correct, complete, and up-to-date information.

Ship Information Book

When a ship is built for the Navy, the builder prepares a Ship Information Book (SIB). The ship's crew uses the SIB to familiarize themselves with the ship's characteristics. Normally the SIB will contain the following eight volumes:

1. Hull and Mechanical
2. Propulsion Plant
3. Auxiliary Machinery, Piping, Ventilation, Heating, and Air-Conditioning Systems
4. Power and Lighting Systems
5. Electronic Systems
6. Interior Communications
7. Weapons Control Systems
8. Ballasting Systems

A copy of the SIB is forwarded to NAVSEA. Then NAVSEA prints and distributes copies of the SIB to the appropriate locations. When changes are made to the ship, corrections to the SIB should be sent to NAVSEA. NAVSEA will incorporate the corrections, and reprint and distribute the SIB.

PERSONNEL QUALIFICATION STANDARDS (PQS)

The General Damage Control Qualification Standard, NAVEDTRA 43119-2, is mandatory for all hands. You should also be familiar with the following damage control qualification standards.

1. *Damage Control Emergency Parties Qualification Standard,* NAVEDTRA 43119-3
2. *Damage Control Systems and Equipment Qualification Standard,* NAVEDTRA 43119-4
3. *Division Damage Control Petty Officer (DCPO) Qualification Standard,* NAVEDTRA 43119-5
4. *Conflagration Station Operator Qualification Standard,* NAVEDTRA 43119-6

You will be assigned to a repair locker for general quarters and an in-port emergency party. You will be required to complete the appropriate sections of PQS that cover your assignments. You should try to complete all sections up to and including the section on Repair Party Scene Leader. In doing so, you will gain valuable knowledge in damage control, and, if necessary, you will be capable of taking over as scene leader during an emergency.

As a Damage Controlman you should understand the Ship's Maintenance and Material Management (3-M) System, along with the supply and inventory control procedures. This knowledge is required for advancement. You will find the necessary information in chapters 7 and 8 of *Military Requirements for Petty Officer Third Class,* NAVEDTRA 10044.

SUMMARY

You have been introduced to damage control in this chapter. We discussed the responsibilities of individual personnel in a ship's DC organization and sources of information for training. The remainder of this manual will cover the equipment, systems, and procedures used in damage control. Remember, damage control is an ALL-HANDS responsibility. However, the DCs maintain the majority of the equipment and systems. As a DC, you will be recognized by your shipmates in other ratings as an expert.